ABSTRACT

The present invention relates generally to growth factors and more particularly to growth factors which are capable of stimulating or otherwise facilitating formation of insulin-secreting cells. The identification of these growth factors permits the development of protocols to culture cells *in vitro* for transplantation into mammalian and in particular human subjects with insulin-dependent type 1 diabetes or related conditions. It is further contemplated that the endogenous expression of growth factors required for the development of insulin-producing cells may be manipulated *in vivo*, by the appropriate administration of agents including genetic agents capable of regulating the expression of growth factors in pancreatic duct epithelial cells. The growth factors may also be administered to subjects with type 1 diabetes to stimulate the proliferation and differentiation of pancreatic cells into insulin-secreting cells. The present invention also provides modulators of growth factor-mediated pancreatic cell differentiation. Such modulators are useful in the treatment *inter alia* of β cell tumors and/or pancreatic cancer.